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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,139

04/16/2004

Henry Buijs

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7590

02/17/2005

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EXAMINER

ROSENBERGER, RICHARD A

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,139

Applicant(s)

BUIJS ET AL.

Examiner

Richard A Rosenberg

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Haworth et al (US 6,144,444).

As in independent claim 1, the reference shows a non-intrusive device for allowing spectrum analysis of a confined stream through a light-transmitting conduit section of a line (conduit 10), comprising a clip (clamp 30; see figure 2 in particular) adapted to be externally mounted on the light-transmitting conduit section (10), said clip being at least partly made of a light-transmitting material (optical fiber 15) and connectable to a source of light (16). The arrangement of the

reference directs a beam of light transversally through the conduit section; the beam of light is directed transversally through the conduit; the claim does not required it be received transversely through the conduit; but see also column 2, lines 24-25. The reference teaches using infrared light, the preferred wavelength range given in column 8, line 7 includes infrared light, thus the light-transmitting material of the reference is selected from a group consisting of: near infrared transmitting material and infrared transmitting material, otherwise the disclosed wavelength range could not be used. As shown in particular in figure 2A, the clip (clamp 30) includes a hollow body housing at least one optical element (fibers 17, 19), said hollow body defining a peripheral open ended slot for receiving the light-transmitting conduit section of the line. The claim reference to the conduit as being a "process line", but gives no structure that distinguishes the clamp and line of Haworth et al; thus the claim language of the line being a "process line" is a non-limiting statement of intended use.

As in claim 2, the device of the reference is releasably secured; the reference refers to removing the clamp for the conduit (column 6, lines 20-21).

As in claim 3, the device is adjustable to be securable on conduits of different cross-sectional dimensions (column 6, lines 48-50). As in calm 4, the slot for receiving the conduit receives interchangeable conduit adapters (42, see figures 2B and 2C) to grip conduits of different external diameters.

4. Claims 5 and 10 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haworth et al (US 6,144,444) in view of Enejder (US 6,510,330).

See above for a discussion of Haworth et al.

As for claims 5, Haworth shows a particular arrangement for attaching the optical sensor to the transparent conduit, showing a system that does not have a cover that is intended to be removable. Enejder shows an arrangement for connecting an optical measuring device to a transparent conduit (3) of measuring a liquid flowing therethrough, and shows as a part of that arrangement a removable cover (2). It would have been obvious to use this type of known arrangement with a removable cover for attaching the optical measuring means as shown in Haworth et al because, as shown by Enejder, it is a known alternative arrangement for accomplishing the same end of attaching an optical measuring arrangement to a transparent conduit for measuring the fluid flowing therethrough.

As relating to claim 10, Haworth et al explicitly sets forth an optical arrangement for measuring light reflected or scattered by the fluid, although that reference mentions measuring light transmitted through the fluid (column 2, lines 23-25). It is known in the art that the receiving optics can be located on the opposite side of the conduit and the transmitted light measured; see Enejder, with light source 4, and transmitted light detector 6. It would have been obvious to use this type of placement of the optical elements, such as the fibers of Haworth et al, in the system such as is shown by Haworth et al because such transmitted light tests are

known in the art, are known in the art to be useful, those in the art know how to arrange the optical elements to make transmitted light measurements, and Haworth et al at least suggests such transmitted light measurements can be made.

Similar to claim 10 for claim 12. Haworth shows the claimed clip (30) detachably secured to the conduit with an optical path defined to intersect the conduit for optical measurement; see the discussion of claim 1 above. As for claim 10, Haworth et al suggests, and Enejder shows an optical arrangement, for measuring transmitted light in an optical measuring system for measuring a fluid in a conduit. As for claim 10, arranging the fibers of Haworth to be on opposite sides of the conduit to measure transmitted light would have been obvious for the reasons above.

As in claim 14, Haworth et al directs light to and from the clip, and the conduit therein, using a fiber optic cable (fibers 15, 17, 19 taken together). A placement of the optical fiber opposite of the light transmitting fiber to receive the transmitted light will as set forth for claims 12 above, as in claim 15, include a second connector to connect the fiber to the sensor.

As in claim 16, as discussed for claim 1 above, Haworth et al teaches the preferential use of light including infrared light (column 8, line 7), and thus the light transmitting material of that reference is selected from the group including infrared-transmitting material.

5. Claims 6-9, 11, 13, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haworth et al (US 6,144,444) in view of Enejder (US 6,510,330) and Soodak et al (US 4,227,814) and Penhasi et al (US 3,527,542).

See above for a discussion of Haworth et al and Enejder.

As set forth above, it is known to place an optical measuring device onto a transparent conduit to measure the fluid flowing therethrough. Those in the art know that the details of the means to so locate the optical arrangement on the conduit can vary; there is not, and there is known not to be, a single manner of doing this.

As in claims 6, 11, 13, 17 one known manner of doing this is to provide a slot between walls of a light transmitting material; see Soodak et al, which shows sliding the conduit into a slot with the light being passed through the conduit through the walls holding the conduit, and Penhasi et al which shows that it is known that the walls can be made of light transparent material where they engage the conduit (claim 17), forming gripping arms to hold the conduit in place (claims 11 and 13). It would have been obvious to construct the walls of Soodak et al of light transmissive material as shown by Penhasi et al because this is a known manner of constructing such a conduit holding slot and it would better ensure a smooth optical contact minimizing distortion due to unevenness and unwanted and possibly irregularly curved surfaces in the optical path.

As in claims 7, 8, 9, 18, and 19 Haworth teaches that optical fibers can be used to carry the light to and from the conduit, and the system thus has connectors for connecting the fibers to the rest of the instrument, both at the clip end and the source and detector ends of the fibers.

As in claim 20, as discussed for claim 1 above, Haworth et al teaches the preferential use of light including infrared light (column 8, line 7), and thus the light transmitting material of that reference is selected from the group including infrared-transmitting material.

6. Zissimopoulos et al (US 4,312,341) shows an optical arrangements attached to a transparent fluid conduit with optical fibers arranged to measure transmitted light. Kedar (US 5,665,975), Shana et al (US 6,687,004), and Doms (US 6,290,912) show similar arrangements which attach to a transparent conduit to measure the fluid flowing therethrough. Shana et al, in column 1, line 14-21 and column 3, lines 19-34 notes such system have several different art-recognized uses, including not only blood purification systems and the like, but other industrial uses as well. Kedar also notes the use of such a system in industrial uses.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

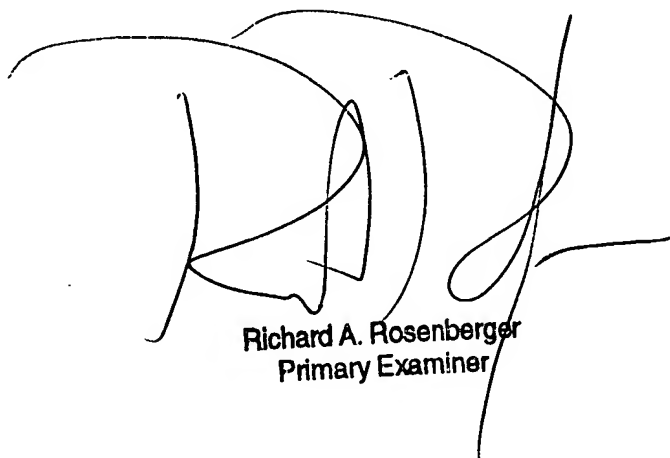
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext.

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77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger
14 February 2005



Richard A. Rosenberger
Primary Examiner